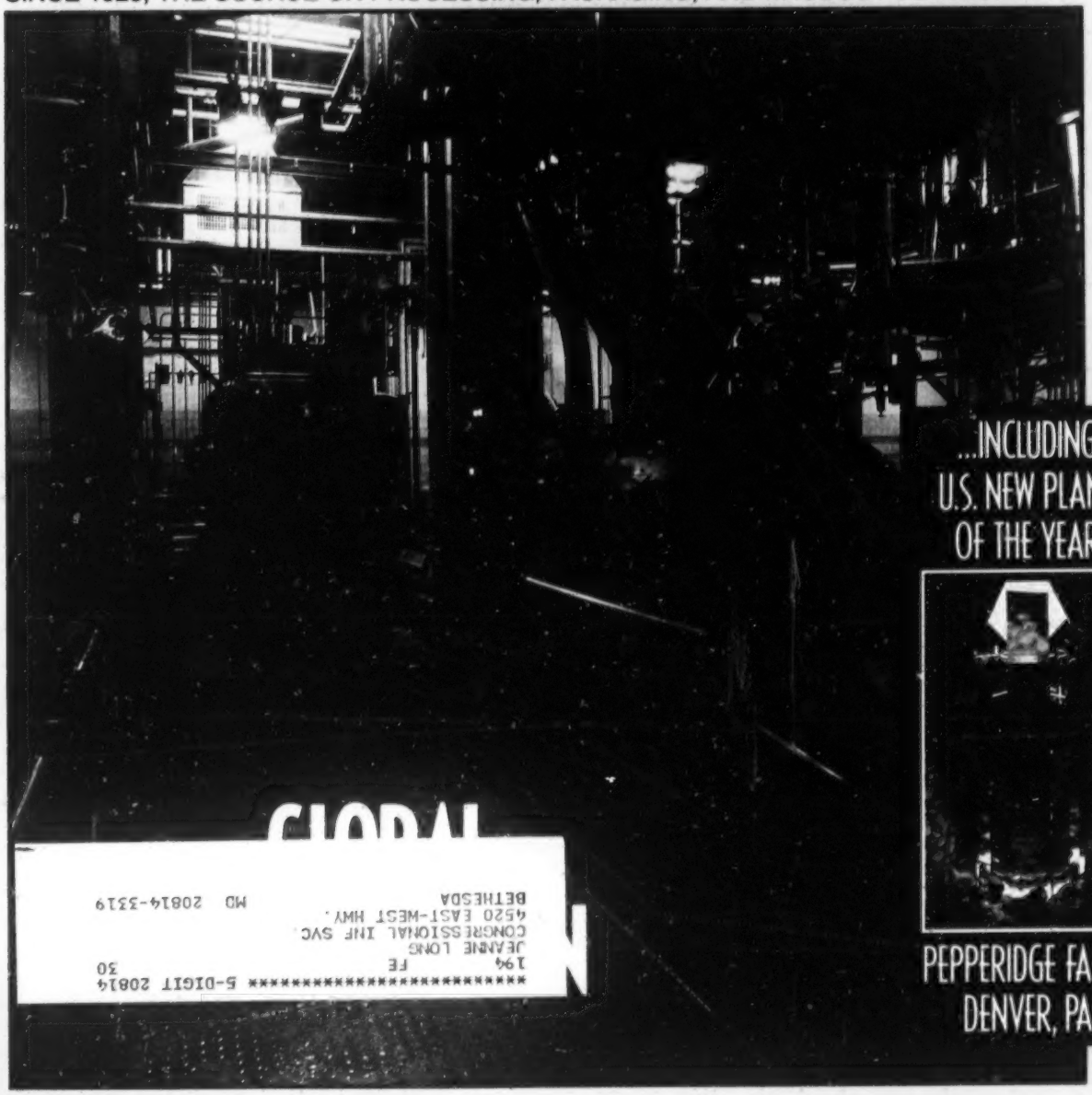
CHILTON'S

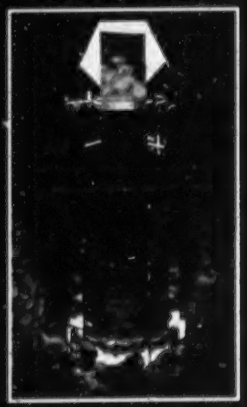
SEPTEMBER 1992

FOOD ENGINEERING

SINCE 1928, THE SOURCE ON PROCESSING, PACKAGING, AND PRODUCT DEVELOPMENT



...INCLUDING U.S. NEW PLANT OF THE YEAR



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FOOD ENGINEERING

ABOUT THE COVER

Amid stiff competition, Pepperidge Farm's Denver, PA facility has been selected U.S. New Plant of the Year. The plant's state-of-the-art biscuit mixing area and its winning trophy grace the cover.
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SPECIAL EMPHASIS

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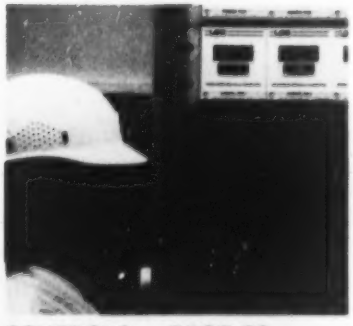

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ENGINEERED FOODS

20 Biological Advances Improve Oil Stability
In light of recent nutrition and lipid research, mono-unsaturated fatty acids seem to sit easily astride the fence between nutritional value and oxidative stability.

22 Nonfat Dairy Products Cut Fat in Pizza
Two new products from Kraft Food Ingredients are designed to make treats such as cheesecake and pizza easier on the waistline.

22 Marketplace—Fine Italian Foods
Italian food has always been the most popular ethnic fare. Products offered at the Fancy Food show in late July provided new twists to old Italian favorites.

27 Improving Deli Hams with Carrageenan
This fall, it looks like carrageenan will finally be permitted in water-added hams sold in the U.S. Its use should significantly improve the eating quality of hams.

28 Xanthan Gum for High-salt Systems
You've probably heard that salsa now outsells ketchup. Products like salsa may benefit from the addition of Kelco's new "brine tolerant" xanthan gum.

28 Oil Flavors Improve Reduced-fat Foods
New oil flavors give the taste of fat to lowfat foods. One to two ounces of the flavors replace 100 pounds of oil.

PROCESSING & CONTROL

48 Aseptic System Processes Liquids, Solids
Alfa-Laval has an answer to the problem of how to aseptically process low-acid particulates and sterilize the particulate without over-processing the liquid.

50 Brix Controlled On-line by SPC
Critical-angle refractometers continuously monitor sugar concentrations in sliced peaches and signal controllers to adjust sugar to specified levels.

FOOD PACKAGING

68 Rotary System Improves Packaging
Lunch Bucket shelf-stable microwaveable entrees feature a plastic overcap designed with an inner lip seal for tight fit to avoid product leakage during heating.

70 Silica Coated Films Arouse Interest
Pack Alimentaire was the site of a standing-room only session on the intriguing topic of glass-coated films.

FEATURES

84 Global New Plant Design
A number of new food plants began operations this year. *Food Engineering* takes a look at the best of these and reveals its selection for New Plant of the Year.

107 The 1992 International Dairy Show
A heady mix of 50 seminars, record numbers of exhibits, and solid entertainment at the New Orleans Convention Center should give the dairy industry its best show ever.

115 Site Selection: Surveying the Possibilities
Two decades ago, food companies would do their own site studies, but now it takes full-time experts to navigate through the ins and outs of site selection.

121 Making Sensory Panels Work
Like other expensive instruments, descriptive panels require a fair amount of TLC. But they provide a wealth of information for R&D and QA.

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JESSE H. NEAL AWARD-WINNING EDITORS

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INDUSTRY REPORT

70% voice satisfaction with food safety ...

Some 70 percent of the consumers polled by the Grocery Manufacturers of America, Inc. (GMA) expressed confidence in the safety of packaged food and 72 percent are happy with what is currently being done to ensure the safety of packaged food. Only 12 percent said major changes were in order, while 11 percent said minor changes would work. Approximately, the same numbers of respondents feel the national government, rather than the states, should be responsible for ensuring that the food supply is safe.

An impressive 72 percent expressed confidence in the safety of packaged foods.

The research was conducted via telephone interviews with a national cross section of just over 1,000 consumers. Seventy-one percent read labels when they consider buying a packaged food product for the first time, primarily to find out about fat or cholesterol, vitamins and minerals, salt and calories. An important finding is that ***63 percent of the shoppers say the current nutrition label tells them what they want to know.*** *Twenty-eight percent said the label fails to provide enough info. Shoppers said accurate and informative labeling should be among the industry's top priorities in the future.* *(Continued on page 18.)*

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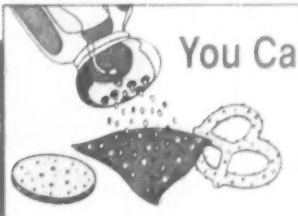
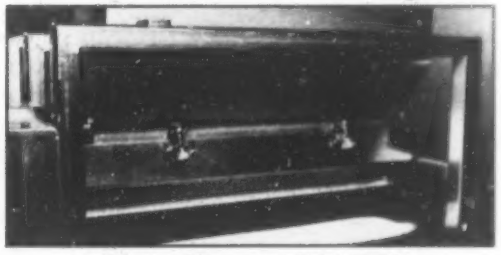


You Can Do This...

OR

You Can Do It Right!



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... few shoppers go for environmental effects of packaging

Interestingly enough, as record numbers of consumers embrace recycling, very few pay much attention to environmental claims made on packaging prior to purchasing, according to the GMA study. Only three percent of those surveyed said environmental packaging was the most important consideration when deciding upon a purchase, another 11 percent said it was their second most important consideration. Meanwhile, 26 percent said it was the least important factor. While environmental packaging is not a deciding factor in a buying decision, record numbers of consumers are recycling. Three out of five shoppers say they routinely separate their trash before taking it out for collection.

Factor	Important	Least Important
Nutrition	44%	3%
Taste	17	5
Ease of preparation	5	43
Environmentally responsible packaging	3	26
Price	19	26
Product safety	9	11

Source: Grocery Manufacturers of America, Inc.

*A startling finding was that **43 percent of the respondents said ease of preparation was least important** to them. Perhaps this is because shoppers buy convenience foods and ingredients that they already know can be prepared within a reasonable time frame and so they don't consciously think about preparation time while making a buying decision.*

Americans are buying Irradiated Foods.

The opening of the first American facility dedicated to food irradiation marked a breakthrough in the food industry. Bringing irradiated produce into the marketplace marked another breakthrough — in record sales!

Shoppers in North Miami Beach purchased 1000 pints of irradiated strawberries over six days, and in Chicago, irradiated berries outsold the unirradiated fruit by nine to one. Consumer response at a Central Florida Strawberry Festival was even more remarkable. More than 12,000 pints of irradiated berries were sold during the 11-day event.

Quality was the key: produce treated with irradiation does not require post-harvest chemical fumigants, and stays fresh longer.

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For more information about the latest developments in food irradiation, contact:
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